

# Assignment 1: Testable Assumptions & Test Vehicles

## Assignment Instructions

For this assignment, you'll be developing:

- A prioritized set of five assumptions for your team to test
- Three different test vehicles for each of your top three assumptions

You can do this using the Word template that follows the instructions, or you may want to start working from a complete Venture Design Template.

### 1. Define your project area.

Robert the project manager, who is assigned to and ERP implementation in the airline industry, has an idea concerning the ERP solution who has developed an aircraft maintenance model, which seems to have a functional no-fit of more than 35 percent for almost all airliners. Due to the fact that many airliners already work with this ERP solution and have implemented two or more expensive functional modules, a solution for a fitting aircraft maintenance module needs to be developed, because there is a mutual supplier – client interest. The implementing project manager who has long worked in the aerospace and airline business asked Scenic fly and the ERP supplier BAS if they like his help in designing a functional fit Aircraft maintenance module.

*To help your peer reviewers understand the software idea you are developing, introduce your idea with the following positioning statement:*

For **Scenic Fly** who need and integrated ERP solution, with a well-functioning Aircraft Maintenance module named BAS Engineering and Maintenance module is a ERP Maintenance planning and maintenance tasking tool providing information about when and how certain maintenance task are performed. A working and functional fitted ERP maintenance module has many advantages concerning interactions with ERP reporting, supply chain, tooling and warehouse modules who are interlinked and provide reporting capabilities. It is compelling to align those aircraft maintenance processes and keep an strategic advantage over competitors ( airlines) concerning speed and process superiority in this very competitive business. Alternatives for an ERP solution are carefully examined, analysed and weighed against other product, but are labelled as insufficient not giving full business alignment and process maturity as needed.

c. Frame your core/summary value hypothesis. This is just a very high level summary of what you want to do for the user and how you hope they'll respond. You'll use the same general format we've been applying for assumptions:

Cindy Jansen is an aircraft engineer at Scenic Fly and she encounters certain specific problems like;

a. Some functional areas like hierarchic upper and lower filtering of maintenance tasks and adding modifications are not covered in the software module. That will lead to sloppy processes and lack maintenance task performed sign of system output. Where they're currently using; To fit them where possible staying in the boundaries of the current BAS aircraft maintenance module and business process- object model. And if we Redesign the module software using the knowledge from two or three most representative, experienced and competitive airlines in the world. Share costs and benefits and make it useful for many companies, integrating with other BAS ERP modules they will be interested in the solution and will fund the design – prototyping phase and surely will buy the redesigned modules.

Cindy Jansen is an aircraft engineer at Scenic Fly and she encounters certain specific problems like;  
b. Insufficient and unreliable reporting. Which can lead to grounded aircrafts by authorities.  
Where she is currently using a certain alternative; Try to shape and modulate the current reporting tool with the actual available data as good as it gets. And if we Use Agile to define what are the common reporting needs and so corresponding data for Scenic Fly and three other major airlines are to make it viable. Involve the aviation authorities during this process by the narrative collaboration principles to help find out with their specific needs are. This to sort out operational disruptive actions by aviation authorities. By doing so a generic solution for the whole airline industry can be realized, including FAA approval. Cost can be split and the solution will be surely bought and paid by multi airline operators including Scenic Fly as custom launcher.

Cindy Jansen is an aircraft engineer at Scenic Fly and she encounters certain specific problems like;  
c. Not fully utilizing ERP concept by not corresponding data and lack of module interaction vs. legacy systems. Losing money and time. Cindy is currently using a certain alternative; Take the not fully integrated ERP system for granted and solve alignment issues with manual reporting and (manual) work arounds.

And if we Redesign the Aircraft maintenance module and be aware of the needed integration with other modules, by finding out which functions and data are related to processes and functions specific for aircraft engineering and maintenance business, they will be even more encouraged to buy and continue with stage 2 of this project.

## 2. Unbundle the core/summary value hypothesis into more detailed/specific assumptions.

a. Take your core/summary value hypothesis and decompose it into a more detailed set of at least five 'child' hypotheses to test using the same formula (but for your more detailed/specific hypotheses):

If we [do something] for [persona], they will [respond a certain way].

<b>Redesign the module software using the knowledge from two or three most representative, experienced and competitive airlines in the world. Share costs and benefits and make it useful for many companies, integrating with other BAS ERP modules</b>	<b>Priority</b>
If we can sort out the hierarchic lower tasks based on ATA chapter and airframe location for Cindy we can solve, they approx. doing only 60 percent the same tasks ( 2 or more times, normally).	<b>4</b> This is a crucial function and is based on the companies advantage over their competitors extremely important
If we can add a new category maintenance task, Cindy can define. design and prototype the modification category.	<b>5</b> Directly key profit driver as additional possibility to add modifications as primary task category amongst ( time limited work, general tasks, wearing out tasks, etc.
If we can involve other airline operators Cindy and others can add more valuable ideas and test scenarios to these value hypothesis	<b>X</b> not sure
If we can print the location of the upper task on the task cards and link lower hierarchic tasks with the same location to the same panel or door. Cindy can reduce the open tasks by approx. 3 to 4 hours work on a basic maintenance visit.	<b>6 – 10</b> is a child function derived from the need for upper and lower hierarchic tasks filtering.
If we adjust print programs with the new GUI and adopt and test the new prints layout Cindy can help engineers reduce their workload with 2 ours per shift.	<b>6 – 10</b> is a child function derived from the need for upper and lower hierarchic tasks filtering.

<b>Use Agile to define what are the common reporting needs and so data for Scenic Fly and three other major airlines are. Involve the aviation authorities during this process by the narrative collaboration principles. This to sort out operational disruptive actions by aviation authorities.</b>	<b>Priority</b>
If we inform with aviation authorities what specific needs they have concerning maintenance output data, Cindy can prepare some test assessing if data is available, integer and what we need to add, manipulating to avoid business discontinuity in near future.	<b>1</b> If we do not know current demands FAA we RISK grounding or at least a time constraints on delivering
If we share and validate prerequisites with other US airlines to be FAA compliant Cindy has to execute this RISK full task only once saving money, time and avoiding disruptive business RISK.	<b>2</b> Direct action as pivotal child
If we can make an extraction out of the databases of our legacy systems we have already a data structure and content so that Cindy can save time in the personas, problem scenario and prototyping stage.	<b>5</b> This assumption can save time and makes work easier for multiple key profit drivers

<b>Redesign the Aircraft maintenance module and be aware of the needed integration with other modules so find out which functions and data are related to processes and functions specific for aircraft engineering and maintenance business.</b>	<b>Priority</b>
If we can assess the possibilities of redesign of modules Ronald Gunst (project manager) can proceed further or stop the project.	<b>1</b> This is key to the venture continuity
If we can assess and define the integration and needed interfaces Eric Kos ( developer BAS) can start making test assumptions and validate them.	<b>6 – 10</b> needed for incremental improvements on interfaces realization.
If we can write down an airline business object model Thomas Janssen ( business analyst) can start with mapping functions and defining interfaces.	<b>6 – 10</b> needed for incremental improvements on interfaces realization.

3. Prioritize your more detailed assumptions and explain the priority level based on the following scale

1 = Pivotal: If this is disproven, the venture needs to be canned or go through a fundamental pivot.

2 = Child of a pivotal assumption: Same assumption but more detail, specificity

3 = Child of a child: More detail on one of the priority 2 assumptions above

-----End of truly pivotal assumptions-----

4 = Extremely important: This assumption substantially affects key profit drivers.

5 = Important: This assumption affects key profit drivers.

6 – 10 = Tactical-- For incremental improvements in various areas.

X = Not sure: Not being sure of the priority is much better than skipping it!

#### 4. Plan test vehicles for each assumption.

a. For each assumption, diverge the possibilities by drafting **three** (nine total) different test vehicles (Wizard of Oz, Concierge, and Sales). Really think through how you might test the assumption using each MVP archetype. Look at both the cost (how much time and money the test will take) and the benefit (how conclusive will the results be) of each experiment.

#	Priority	Key Assumption	Test Vehicles
1	4	If we can sort out the hierarchic lower tasks based on ATA chapter and airframe location for Cindy we can solve, they approx. doing only 60 percent the same tasks ( 2 or more times, normally).	<p>Wizard of Oz We make a GUI front that looks like a maintenance task filtering system, but based on the printed out task cards for section 200, main service panel RH engine we map which is the highest and first to execute task and all lower hierarchic task comes under it related to the same access panel.</p>
			<p>Concierge We ask multiple users and technicians to participate by simulating the process manual and get measurable learnings from the process and common experience.</p>
			<p>MVP <i>The outcome needs to be if this propositions saves a lot of time, making work easier and saves money. (&gt;4 -6 hours per maintenance visit p.p)</i></p>
2	5	If we can add a new category maintenance task, Cindy can define. design and prototype the modification category.	<p>Wizard of Oz Make a frontend simulation look alike BAS ERP maintenance module and deliver the opportunity to add a maintenance task category and observe if this task can easily be performed and how users experience this</p>
			<p>Concierge We ask specialists to describe the add maintenance category process on paper, discuss how it's should work and how they vision the function prerequisites. Common learnings and shared ideas how to perform and go true the concierge MVP are crucial for IT project learning.</p>
			<p>MVP See if other airline operators are interested in this compelling assumption and sell.</p>

3	5	If we can make an extraction out of the databases of our legacy systems we have already a data structure and content so that Cindy can save time in the personas, problem scenario and prototyping stage.	<p>Wizard of Oz</p> <p>Make an excel sheet and GUI frontend simulation and fill with data column and data field descriptions new system and map those with the new database needs. Access if is useful and report</p>
			<p>Concierge</p> <p>Map data existing with new needs together with IT specialist and future users and learn which parts are reusable an what is the delta soll situation.</p>
			<p>MVP</p> <p>Determine what is the delta and how much time and money it will take to fill the data gap for the soll situation</p>